

Application No.: 10/809,896

## REMARKS

### I. Introduction

In response to the pending Office Action, Applicants have amended claims 1 and 7 in order to overcome the § 112 rejections. In addition, claim 3 has been rewritten in independent format. No new matter has been added.

Applicants appreciate the indication by the Examiner of allowable subject matter recited in claims 3 and 8-12.

For the reasons set forth below, Applicants respectfully submit that all pending claims as currently amended are patentable over the cited prior art.

### II. The Rejection Of Claims 1 And 6 Under 35 U.S.C. § 102

Claims 1 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Takasu et al. (*Electrochimica Acta* 45 (2000), 4135-4141). Applicants respectfully submit that Takasu fails to anticipate the pending claims for at least the following reasons.

With regard to the present invention, amended claim 1 recites a colloidal ruthenic acid compound containing a ruthenic acid nanosheet, the ruthenic acid nanosheet having a thickness of not more than 1 nm, represented by the formula (1):  $[\text{RuO}_{2+0.5x}]^{x-}$ , wherein  $0 < x < 1$ .

One feature of one embodiment of the present disclosure is a colloidal ruthenic acid nanosheet of less than 1 nm in thickness represented by the formula (1):  $[\text{RuO}_{2+0.5x}]^{x-}$ , wherein  $0 < x < 1$ . A colloid includes non-agglomerated portions as well as agglomerated portions. Accordingly, one skilled in the art would be able to form the ruthenic acid nanosheets of the present disclosure, which are electron conductive layers having electrochemical stability and are stacked with proton conductive layers comprising water or hydrated protons on the molecular

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level. As a result of this structure, the layered ruthenic acid compound of the present disclosure exhibits significantly increased charging capability and is applicable to a high-powered large-capacitance super capacitor.

It is alleged that Takasu teaches a process of adding a layered ruthenic acid compound to an aqueous solution of HCl (a solvent) which would form a colloid ruthenic acid compound. However, the process described in Takasu only leads to a protonized layered ruthenic acid compound, not a colloidal one. Accordingly, Takasu does not disclose a colloidal ruthenic acid compound containing a ruthenic acid nanosheet, and as such, Takasu fails to anticipate each and every claim element of claim 1 of the present disclosure.

As the Examiner is aware, anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983). As Takasu, at a minimum, fails to disclose a colloidal ruthenic acid nanosheet having a thickness of not more than 1 nm, represented by the formula (1):  $[\text{RuO}_{2+0.5x}]^x$ , wherein  $0 < x < 1$ , it is clear that Takasu fails to anticipate claim 1. Therefore, it is respectfully requested that the rejection of claim 1 under § 102 be withdrawn.

**III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 1 is patentable for the reasons

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set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

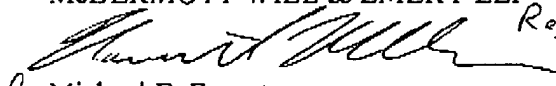
**IV. Conclusion**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance; an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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